



BULLETIN OF THE INTERNATIONAL ORGANIZATION
FOR SEPTUAGINT AND COGNATE STUDIES

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BULLETIN IOSCS

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MINUTES OF THE IOSCS MEETING

27 August 1983 — Salamanca, Spain

Albert Pietersma, President of the IOSCS, presiding

1. E. Ulrich gave the minutes of the December 1982 meeting of the IOSCS in New York. These were accepted.
2. A. Pietersma reported:
 - A. The proceedings of the Salamanca meeting will be published, edited by N. Fernández Marcos. Gratitude was expressed to Professor Fernández Marcos for this in a formal motion by J. W. Wevers and seconded by E. Ulrich.
 - B. The IOSCS will not meet with the SBL in Dallas in December 1983 because of the timing and location of the SBL meeting; because the IOSCS has had its meeting with the IOSOT in Salamanca; because the IOSCS is an international organization, separate from the SBL.
 - C. The IOSCS has approximately \$1385, reported in the absence of the Treasurer.
3. E. Tov expressed thanks to the President for his work in organizing the Salamanca meeting.
4. J. W. Wevers moved that a letter of protest be sent to the SBL for scheduling a meeting opposite the meeting of the IOSCS. This was carried.
5. C. Cox reported that the membership of the SCS editorial committee will be N. Fernández Marcos (Spain), E. Tov (Israel), M. Mulder (Holland), and I. Soisalon-Soininen (Finland).
6. J. Lust inquired about the payment of IOSCS dues for European members: there is a problem of banking charges. E. Ulrich suggested adding a couple of people outside Holland (where A. van der Kooij can be sent funds) who would be able to receive dues.

Claude Cox
for the Secretary

[II] studies on the LXX and the Hebrew text, including the entangled relationships of textual and literary history (Barthélemy), the development of a "reading tradition" of the Hebrew text (Revell), the LXX translators' misunderstanding of their Hebrew text (Tov), and a complete list of the variant readings in the Qumran LXX MSS plus the publication of the newly-identified fragments of 4QLXXDeut (Ulrich);

[III] studies on the linguistic and translational aspects of the LXX, including the originality of *Kyrios* or the Tetragram in the LXX (Pietersma), the problem of the numbers in Numbers 1, 2, 26 (Quast), the translation of the Hebrew personal pronoun when it functions as subject (Soisalon-Soininen), and the milieu of 1 Esdras in the light of its vocabulary (Talshir); and

[IV] studies on exegetical, recensional, and translational aspects of the transmission of the LXX, including early exegesis in the Greek of Deut 21:1-9 (Dion), the Lucianic text in the Books of Kingdoms (Fernández Marcos), Josephus' textual witness to the genealogies in Gen 5:3-28 and 11:10-26 (Fraenkel), the form of the text of Isa 59:20f in Rom 11:26f (Schaller), a Ciceronian Revision of the Armenian Bible (Cox), the place of Syh^T within the LXX textual tradition of Deuteronomy (Perkins), and the textual affiliations of Gen 1:1-4:2 according to Papyrus Bodmer III (Peters).

The rich volume begins with a biographical note and concludes with a bibliography of this *bene meritis* Septuagintalist.

Julio Treballe published this year *Jehú y Joás: Texto y composición literaria de 2 Reyes 9-11*, a book-length study paralleling his earlier *Salomón y Jeroboán* and utilizing the methodology he described in his article in *BIOSCS* 15 (1982) 12-35.

The first part of the book analyzes both on the broad scale and with specific examples the main ancient textual witnesses: the *Vetus Latina* (which at times leads to the recovery of the Old Greek when the latter is no longer extant), the Old Greek (which sometimes witnesses to a Hebrew text at variance with and superior to the MT), and the MT, in order to lay a reliable basis for the literary and

historical analysis which follows.

The second part analyzes the narratives of the Yahwistic revolt of Jehu and Yahwistic restoration of Joash. The prior textual analysis allows the recovery of the history of the literary composition and redaction of these narratives. This recovery is then able to illumine aspects of the social and religious history of the monarchic period.

As in his earlier works, Treballe focuses constant and competent attention on method, which makes this book valuable for its own sound textual, literary, and historical results, and valuable as a model for further research in the field of Old Testament studies.

Biblia del Mar Muerto: Profetas Menores by Luis Vegas Montaner is a critical edition of the Minor Prophets on the basis of the Hebrew MSS discovered in the Judaean Desert and published to date. The most extensive text available is Mur 88 (see DJD 2). The lemmata of the *pešarim* are also used: 1QpHab, 1QpMic, 1QpZeph, 4QpHos^{a,b}, 4QpNah, etc., as well as 4QFlor, 4QTanhumim, 4QCatena^a, and 4QapLam, but the unpublished MSS 4QXII^{a,c,d,e,f,g} are not included.

The critical text presented is the fragmentary text of the Mur and Q MSS themselves, based on a fresh rereading by Professor Vegas Montaner of the photographs published to date. The order is that of the Hebrew Bible, not necessarily that of the Mur and Q MSS. A critical apparatus lists variants from BH³ (=BHK) and BHS, from other Mur and Q MSS (including variants in the *pešer* to the lemma), and from the *editio princeps* of each MS—attributed when appropriate to corrections by other scholars (e. g., Strugnell, Milik). The volume has an elaborate and clear introduction which lists the texts and editions used, offers a list of variants from BHS, describes the norms used for the transcription, etc.

This is a handy collection of the Mur and Q texts of the Minor Prophets. For critical use, one will want to use in conjunction with it, as Prof. Vegas Montaner has done, the published photographs, the earlier published editions and the subsequent corrections to them (especially by Prof. Strugnell in *RevQ* 26 [1970] 163-276).

In a volume entitled *Simposio Bíblico Español (Salamanca, 1982)* N. Fernández Marcos, J. Treballe Barrera, and J. Fernández Vallina have collected and edited the papers presented at the national symposium celebrated at the University of Salamanca, 26-29 September 1982. The double purpose of the symposium was to reflect the present state of Spanish scholarship in the diverse fields which relate to the study of the OT, and to anticipate the first meeting in Spain of the IOSOT in conjunction with the IOSCS and the IOMS [also held at Salamanca, 26 August-4 September 1983; the IOSCS papers will be edited by Fernández Marcos, the IOMS papers by E. Fernández Tejero, and the publication details listed in next year's *Bulletin*].

The volume is quite large (772 pages) and covers a broad range of topics. Thus, mention can be made only of the categories into which the papers are grouped and the names of authors treating subjects related to the LXX: the bibliographic details of the latter can be found in the "Record of Work."

The papers are grouped into nine categories: [I] Archaeology and the Bible; [II] The Ancient Orient and the Bible, including an article by J. Teixidor; [III] The Hebrew Text, including L. F. Girón Blanc, L. Vegas Montaner, E. Fernández Tejero, and M. T. Ortega Monasterio; [IV] The Greek Text, including J. C. Treballe Barrera, N. Fernández Marcos, M. V. Spottorno y Díaz Caro, and J. González Luis; [V] Books of the OT; [VI] Themes of the OT; [VII] The Targum, including J. Ribera i Florit, R. Vicent Saera, J. Fernández Vallina, D. Muñoz León, and A. Rodríguez Carmona; [VIII] Intertestamental Literature, including L. Díez Merino, F. García Martínez, and A. Piñero Sáenz; and [IX] Hispanohebrew Exegesis. The volume closes with a discourse on "The Bible in Spain: History and the Present." To each article is appended a summary in English.

The volume is well printed and, though large, well bound. The plates, the map (with the exception of a few of the smaller names on p. 44), and the archaeological and textual charts are clearly reproduced.

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THE STRATIGRAPHY OF THE TEXT OF DANIEL AND
THE QUESTION OF THEOLOGICAL *TENDENZ*
IN THE OLD GREEK

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Introduction

Past studies of the Old Greek (OG) text of Daniel have concentrated on discovering the OG translator's unique theological perspective by isolating the variants in the text of "the Septuagint" (σ' = LXX) as judged against the Massoretic Text (MT) and the Theodotonic text (θ').¹ Although such studies are not numerous, they reveal a consensus on the issue: variants can often be attributed to the fact that the OG translator intentionally departed from his Semitic text in order to substitute readings flavored with the historical developments and theological interpretations of his own day.

It may be noted, however, that methodological errors have often been made, two of which are explored in the present study. First, these investigations have failed to distinguish between the original OG, which must be critically reconstructed, and its later, secondary form in Origen's Hexapla or even in much later MSS. Secondly, they have assumed that the *Vorlage* of the OG of Daniel was identical with our received MT, and thus they have not adequately sought after the *Vorlage* of the OG, which text, of course, rather than necessarily the MT, is that against which the OG should be compared. Consequently, they have assumed that any differences are due to the OG translator's penchant for altering the text in view of his own concerns.

Clearer insight into the character of the OG itself and into the question of possible *Tendenz* on the part of the OG translator can be gained by avoiding these methodological errors as well as by utilizing additional MS evidence, viz., 4QDan^{a,b,c} and Papyrus 967, in determining the stratigraphy of the text of Daniel for perspective on variants.

By inquiring into the nature of the OG and its *Vorlage*, this study of the history and stratigraphy of the Semitic and Greek text of Daniel will attempt to provide a more adequate basis for an investigation of theological *Tendenz* on the part of the OG translator. It will conclude by presenting one salient example of the implications of the stratigraphy of the text for assessing a specific past claim of theological *Tendenz*.

Textual Witnesses

As a foundation for text-critical investigation of the OG of Daniel, familiarity with the manuscripts and editions which provide the readings of the OG, θ' , and the MT is required. Assessment of the number of manuscripts available and their reliability helps sharpen the text critic's judgment in determining preferred readings of an original text or of its translation.

Hebrew and Aramaic Witnesses

The Hebrew and Aramaic text of Daniel used as the customary standard, *Biblia Hebraica Stuttgartensia*, edited by W. Baumgartner, is based upon the Leningrad Codex B 19^A, dated to 1008/9 C.E. Included in the BHS apparatus to the MT of Daniel are both the variants in the fragmentary Hebrew-Aramaic manuscripts from the Cairo Geniza and the Massoretic variants collected by Kennicott and de Rossi.

In addition, there are fragmentary manuscripts from Qumran: 1QDan^{a,b}, 4QDan^{a,b,c}, and 6QDan.² The fragments from caves I and 6 show little variation from the text preserved in the MT, and their most interesting contribution for the study of the text of Daniel

is the witness of 1QDan^a, in agreement with the MT, that the Aramaic section begins at 2:4b.³

4QDan^{a,b,c}, presently being prepared for preliminary publication by E. Ulrich, with final publication in *Discoveries in the Judaean Desert* by F. M. Cross and Ulrich,⁴ are in general agreement with the MT, although there are a few significant variants. At present, we call attention to the following selected examples:

- 8:3 איל אחר [מ איל אחר] 4QDan^a; איל אחר [מ איל אחר] 4QDan^b
 8:3 קרנים וקרנים [מ קרנים וקרנים] / [מ קרנים וקרנים] 4QDan^a(vid)
 4QDan^b(vid)
 8:4 [מ ימה וצפונה] 4QDan^a
 8:5 [מ על פני אל פני] 4QDan^a

These variants suffice to indicate that the history of the text of Daniel is more complex than is often assumed and to caution us that the MT, albeit the main witness, fully preserved as it is, is but one witness among several to the text of Daniel.

Besides these Hebrew and Aramaic texts there are two further sources of Hebrew quotations, 4QFlor (4Q174) and the references in the midrashim to Daniel. 4QFlor has two brief quotations from Dan 12:10 and 11:32.⁵ These readings are in agreement with the MT, except ויצטרפן in 4QFlor for ויצטרפן in the MT at Dan 12:10.⁶ References to Daniel in later midrashim on the Ketuvim are found in *Mekilta Shirta* 2:32, 4:26-30, 5, 7:3,9. A discussion of the person Daniel is found in *b. Ber.* 7b,92b and *b. Sanh.* 97a-99a, esp. 98h. But these references do not provide any significant variants for the text-critical study of Daniel.

Witnesses to the Old Greek

The OG text, i.e., the oldest recoverable form of the original translation into Greek of the Hebrew-Aramaic text of Daniel, must be reconstructed critically, not simply accepted from whatever MSS are available, as has sometimes been done. For Daniel this reconstruction is hampered by the paucity of manuscript evidence and

secondary witnesses. The sources include the hexaplaric manuscript 88, the Syro-Hexapla, Papyrus 967, patristic quotations, and many readings of θ' wherein θ' actually preserves the OG (see below). The manuscript evidence for θ' , on the other hand, is not nearly so meager. Several uncial and minuscule MSS are extant, as well as many patristic quotations.⁷

88 and Syh

The main witnesses to the OG, viz., 88 and Syh, derive from the θ' column of Origen's Hexapla. Only one complete Greek MS is extant which witnesses to that θ' text, namely, Codex Chisianus, from the ninth-eleventh centuries. This MS is numbered 88 in Rahlfs and Ziegler (87, erroneously, in Swete).

There is also extant the literal Syriac translation (the Syro-Hexapla) of the fifth column of Origen's Hexapla, done by Paul of Tella in 615-617. Ziegler concludes that there is indeed a close relationship between these two MSS which preserve common mistakes. The Syriac sometimes changes word order, but this is in keeping with Syriac idiom and does not reflect true variants. In most places 88 and Syh preserve the same placement of obeli, asterisks, and metobeli.⁸ Ziegler concludes that, when they differ in the placement of these symbols, the Syh text is the more accurate.

Papyrus 967

Papyrus 967 has been known since 1931 and is very important for reconstructing the OG of Daniel, since it is the only pre-Hexaplaric Greek MS of Daniel preserved. The sections of 967 containing Daniel were brought to England, Cologne, and Barcelona, and have been published in four distinct works.⁹ This MS has been dated by Kenyon to the first half of the third century as the *terminus ad quem*. For the *terminus a quo* Hamm suggests 130 C.E. Although 967 often confirms that 88-Syh is accurate in its textual readings and its placement of asterisks and metobeli, it does provide interesting variants. As with any MS, these variants must be used judiciously. Some are original readings, but others are simply

errors or glosses. Original readings in 967 include:

7:13 προσηγαγον αυτω 967] παρησαν αυτω 88-Syh¹⁰
 9:2 κυριου 967] τη νη 88-Syh
 9:26 βασιλευς 967] βασιλεια 88-Syh.

Errors in 967 include:

9:19 Ισραηλ 88-Syh] ιερουσαλημ 967
 11:4 του ουρανου 88-Syh] της γης 967.

In addition to the direct witnesses of 88-Syh and 967, indirect evidence is found in quotations of early Christian literature, some of which may be judged to come from the OG, or from a tradition close to it and distinct from θ' . These references are utilized throughout Ziegler's work and may be found in his extensive apparatus.

Witnesses to the θ' Text of Daniel

Several uncial and minuscule MSS are extant which preserve θ' ,¹⁰ and several early Greek Christian writers also quote θ' .¹¹ The Rahlfs edition is now superseded by Ziegler's critical edition in the Göttingen series.

The History and Stratigraphy of the Text of Daniel

Theoretical Considerations

The history and stratigraphy of the text of Daniel is actually a subdivision of the theory concerning the textual development of the Hebrew Bible, of the Greek translation with its recensional history, and of the other versions, postulated since the discoveries in the Judaeen wilderness, including Murabba'at, Naḥal Ḥever, and Qumran.¹²

Before 1947 only two sources were available for identifying what the Hebrew-Aramaic text of Daniel would have looked like before the processes of standardization and canonization halted its growth and

development. They are the MT, a medieval text which has ancient roots in one tradition pre-dating standardization, and the *o'* text insofar as it preserves the OG which translated a Semitic *Vorlage* which also pre-dated standardization. Other witnesses, viz., *o'* *o'* *o'*, OL, Vg, Syh, other daughter versions, and Rabbinic and Patristic citations, post-date the beginning of the standardization period after the turn of the era.

With the discovery of the Qumran MSS a new set of sources became available, demonstrating the fluidity of texts circulating in Jewish communities prior to standardization. Though the case may be different for parts or all of Daniel 1-6, the evidence in Daniel 7-12 is not sufficient to warrant a claim that the MT, the Q MSS, and the G have characteristics which fall into patterns that can be identified as belonging to a particular locale, or that these texts have typological differences. Thus, there is insufficient evidence to claim that the MT of Daniel follows a typological pattern seen in the MT of other biblical books, that the Q MSS of Daniel follow a particular "text-type," or that the G of Daniel must be linked with the G of other books.¹³ Rather, the relationship of the MT, the Q MSS, and the G of Daniel to each other is complex; each text has both agreements and disagreements with each of the others.¹⁴

The oldest recoverable Semitic text of Daniel (H) can be attained only eclectically, but the three available witnesses yield readings which either very closely approximate it or actually preserve it. Although the question of an *Urtext* is debated, it is evident that the development of the Semitic text began at some point soon after its written composition. One may not proceed with text-critical judgments about individual readings until the hypothesis is taken into account that the Semitic text, translated texts, and recensional texts all indeed undergo changes as they develop. One must keep in mind that the MT itself is one text among others. The MT, the Q MSS, and the G must be examined on their own merits in each individual reading, without a priori prejudice toward the assumed purity of the MT or against the assumed aberrance of other witnesses.

The aspect of the theory which is important here is that an original Hebrew-Aramaic text underwent independent developments before standardization and that the MT, the Q MSS, and the *Vorlage* of the G developed independently from that text.

Oral Stage

There are grounds for speculating that the textual history of the Book of Daniel may be traced back to an earlier, oral stage. The Prayer of Nabonidus and the OG of Daniel 4-6 appear to preserve alternate forms of the legend of Nebuchadnezzar to that found in the MT; these may ultimately go back to oral tradition. Moreover, the tenuous references to "Daniel" in Ezek 14:14, 20 and 28:3 (not to mention the traditions of Dan'el from the Canaanite Aqhat myth) show that the name (and possibly legends associated with it) was familiar to persons in the land of Israel at a point much earlier than the written composition of the Book of Daniel.¹⁵

First Written Form

The literary composition of the entirety of Daniel 1-12 occurred ca. 166 B.C.E. The debate concerning its composition in Aramaic or Hebrew and its subsequent translation into the alternate language continues. For this study we simply note that the early witnesses to the original written text, the MT and the Q MSS, agree that the Aramaic begins at 2:4b and ends with 7:28.

Subsequent Hebrew-Aramaic Textual Forms

The earliest forms of the text from which preserved MSS are derived are the MT, the Q MSS, and the posited *Vorlage* of the OG. Commentators have pointed out previously that there are verses of Daniel in the MT which are corrupt and which defy any attempts at reconstruction whose accuracy can be assured. Moreover, an investigation of 4QDan^{a,b,c} shows that the superiority or inferiority of readings must be judged individually with reference to other texts and to the context. In 8:5, e.g., the MT correctly reads

על פני where 4QDan^a has אל פני, but in 11:15 the MT reads רישפך where 4QDan^{a,c} have the preferable רשפך.

Some variants may be purely orthographic, e.g.:

5:7 יקרה כתבה ׀, יקרה א כתבא 4QDan^a.

Other variants may offer no true change, e.g.:

1:16 ׀ [אח] פתב[נ] ׀ רחא [יי] ׀, אח פתבגם רייך 4QDan^a.

But some variants show additions or omissions in the MT or the Q MSS, such as in 5:7, where we find:

׀	כשדיא	לאשפיא
4QDan ^a	לאשפיא	חרמסיא [כ]ש[דיא]
σ'	τους	επαιδους και φαρμακους και χαλδαιους
θ'	μαγους	χαλδαιους

Or again, variants may show that different readings existed in the MT and in the Q MSS, e.g.:

5:12 יחקרי דניאל יקרא ׀, יקרא החבא יקרא 4QDan^a.

The *Vorlage* of the OG of Daniel 7-12 appears to be mostly in agreement with the MT and the Q MSS. When, however, σ' differs from the MT or the Q MSS, it is important to examine the possibility that an alternate *Vorlage* might account for the variant. This is the case in general for chaps. 4-6 and in individual readings elsewhere (e.g., 8:1,4).

Hebrew Scribal Copying

In some instances, a superior reading is found in a Q or G MS because the MT contains an error, addition, or omission which derives from the scribal transmission stage. In Dan 7:11, e.g., we find:

׀	חזה הויח עד די קמילת חיוחא
σ' 967	και απετυμπαυισθη το θηριον
θ'	εως ανηρεθη το θηριον

Note that both σ' and θ' witness to the fact that חזה הויח was not

in their respective *Vorlagen*. The MT reading should be considered a scribal addition to the text, stemming from the previous חזה הויח at the beginning of 7:11.

In 8:14 the texts read:

׀	ויאמר אלי
σ' 967 θ'	και ελεεν αυτω

Here אל is the original reading in its early orthography; σ' 967 θ' reflect אל or its later, *plene* form אלי; the MT tradition errs, as the context shows, with אלי presumably due to simple scribal confusion of *waw* and *yod*.¹⁶

These examples caution us to consider the possibility that the preferred reading could be found in a witness other than the MT, and that the MT reading varies from the original due to understandable scribal alterations.

Having sketched the development of the text of Daniel from its oral stage to its first written form, its subsequent Semitic textual forms, and its additional scribal changes, some comments about the Greek translation and recensions are now in order.

The Date and Character of the OG

The dating of the OG of Daniel is hampered by the paucity and debatable reliability of the evidence. It has been customary to date the OG of Daniel to a period not long after its composition (166 B.C.E.), since I Maccabees putatively contains verses which reflect it. This argument was first suggested by Bludau and repeated with modifications by both Montgomery and Di Lella.¹⁷ Di Lella agrees with Bludau and Montgomery that there are five readings in Maccabees which do preserve the OG of Daniel and concludes:

From this evidence it can rightly be assumed that LXX-Daniel goes back to at least the date of the Greek text of I Maccabees. As I Maccabees, originally composed in Hebrew, was translated into Greek no earlier than 100 B.C., we may safely conclude that LXX-Daniel originated at about that time.¹⁸

Yet if we examine these passages, we find that there is no true literary dependence of Maccabees upon the OG of Daniel:

- (1) 1 Macc 1:9 επληθυναν κακα εν τη γη
 Dan 12:4 α' πλησθη η γη αδικιας
 θ' πληθυνθη η γνωσις
- (2) 1 Macc 1:18 και επεσαν τραυματιαι πολλοι
 Dan 11:26 α' θ' και πεσουνται τραυματιαι πολλοι
- (3) 1 Macc 4:41 καθαριση τα αγια
 1 Macc 4:43 εκαθαρισαν τα αγια
 Dan 8:14 α' θ' καθαρισθησεται το αγιον
- (4) 1 Macc 1:54 βδελυγμα ερημωσεως
 Dan 11:31 α' θ' βδελυγμα ερημωσεως

Of these four, only the last is identical with the OG of Daniel. In the first example, the verbs, though from the same root, are in different forms; η γη is the subject in Dan 12:4, whereas γη is the object of the preposition εν in Macc, and the words for "evil" are unrelated. If Maccabees were quoting Daniel, one would not expect these differences. In the second example, the verbal tenses are distinct, and in the third example, not only are the verbal tenses different, but αγιον occurs in different forms.

Even more important than the grammatical differences is the recognition that such phrases as "evils were multiplied on the earth," "many were wounded unto death," and "abomination of desolation" were common expressions from the period of Antiochus' persecution and in fact are found in other biblical texts outside Daniel; thus, to assert that they signify direct borrowing is clearly an exaggeration.¹⁹

Rather than grasping for evidence in alleged quotations to date the OG of Daniel, one should rather rely on indirect witnesses, such as in the Letter of Aristeas, Ben Sirach, and the later recensions of α' σ' θ'. The first two texts tell us when the translation of Daniel could possibly have been made, and the latter texts, especially θ', provide a *terminus ante quem* for the OG.

Although the Letter of Aristeas is laced with legendary material, it does indicate that the translation of the Pentateuch was being undertaken by the third or at least the second century B.C.E. Bickermann suggests a date for the Letter between 145 and 127 on the basis of greeting formulae, names of court officers, and other formal characteristics which correspond to papyri of the second century.²⁰ The actual composition of the Letter of Aristeas itself indicates, according to Tcherikover, that by the second century, and possibly earlier,

Alexandrian Jewry attained a sufficient degree of Hellenization to create Jewish literature in Greek [and] there were Jewish writers in Alexandria who wrote on Jewish subjects for the Jewish audience in Greek.²¹

Surely, if Jews were composing in Greek, it would not be surprising that the Scriptures were being translated as well.

Klein refers to three ancient authors who also attest to the existence of an OG translation of parts of the Hebrew Scriptures.²² Demetrius, who wrote at the end of the third century B.C.E., quotes Genesis according to the translation of the LXX; Eupolemus in the second century B.C.E. refers to the LXX of Chronicles; and 1 Maccabees makes use of the Greek text of some Psalms.

The Prologue to Ben Sirach (not long after 132 B.C.E.) indicates that not only was this work itself translated into Greek but also the translator was apparently familiar with translations of other biblical books:

The Law itself, and the Prophets, and the rest of the books have no small difference when they are spoken in their original form.

These texts show that the translation of the Semitic text of Daniel into Greek was possible and plausible at a point shortly after its written composition.

The Date and Character of the θ' Text

As a *terminus ante quem* for the translation of the OG of Daniel stand the recensions of α' σ' θ', especially θ', since it is the earliest

and since it is clearly based on the OG. Barthélemy showed that Dan- θ' is part of the larger *kaige* recension which he discovered while analyzing the Greek scroll of the Minor Prophets from Naḥal Ḥever, and that scroll has been dated palaeographically to ca. 50 B.C.E. - 50 C.E.²³ This dating receives confirmation in the fact that the θ' text of Daniel is quoted in the NT. And Barthélemy's thesis, that θ' is a recension based on the OG but revising toward the proto-MT and that α' in turn is based on θ' , has been solidly confirmed for the Book of Exodus by K. O'Connell.²⁴

For the Book of Daniel, however, A. Schmitt challenges that thesis, maintaining that the θ' text is not of the same general type as θ' outside Daniel.²⁵ Although Schmitt's study is still accepted as definitive by Di Lella,²⁶ W. R. Bodine has demonstrated the important axiom that the different portions of the sixth column material cannot be treated homogeneously.²⁷ In other words, one must examine whether the sixth column uniformly presents the θ' recension or not; the results of Schmitt's study may not be taken uncritically. Bodine reminds us that the sixth column of Exodus has been confirmed as *kaige*- θ' , yet that the sixth column of Judges is pre-*kaige*, rather than proto-Theodotion.

At any rate, even if the θ' text of Daniel does not belong to the *kaige* recension, it is still an example of recensional activity, based on the OG and designed to present a Greek text more precisely in conformity with the Hebrew text at the turn of the era; and it still dates to the middle of the first century C.E. at the latest, since it is quoted in the NT. Through the general effort around the turn of the era, the revisional and recensional activity on the Greek texts of Scripture resulted in the work of proto- θ' , which possibly underwent further development before being solidified in the present text of θ' . It is not a newly-created independent translation but a recension, since it uses the OG as a basis, retaining in fact a substantial portion of the OG unaltered.²⁸ θ' revised the OG to be closely faithful to its contemporaneous Semitic text, standardizing roots, more closely mirroring syntax and grammatical forms, employing trans-

literation, and eliminating paraphrases. But the recension did not achieve thorough consistency.

α' and σ'

Two further extant witnesses to the recensional history of the G text are α' and σ' . The text of Aquila has been identified as belonging to a rabbi, perhaps a pupil of Akiba, ca. 128 C.E. This text is slavishly literal, a typical characteristic being that, in the words of R. Klein, "Hebrew verbal roots in all their nominal and verbal derivatives are translated by a simple Greek stem,"²⁹ without regard for nuance. This recension, which attempts to conform the θ' recension yet more closely to the Hebrew text current in the second century, is known to us from the Hexapla, from patristic quotations, and from marginal glosses in MSS.

The text of Symmachus, who is identified by Eusebius and Jerome as an Ebionite Christian, gives a free and more elegantly literary rendering of the Hebrew and seems to be familiar with the OG as well as with θ' . This text is also known only through patristic quotations and MS glosses. Because σ' is of a free and literary style, text critics usually refrain from drawing clear conclusions about textual matters from his work.

The Hexapla

Since our main witnesses for the OG, viz., 88 and Syh, come from the Hexapla of Origen, a few remarks are in order concerning this monumental work. It should not be assumed that the aims and methods of the present-day text-critic are identical with those of Origen. He was not attempting to reconstruct the historically original OG as would a modern text-critic who attempts to attain as closely as possible the historically original translation; rather, he had a static view of the Hebrew and Greek texts and was seeking to arrive at what he believed to be the divinely inspired translation. He did not envision earlier Hebrew texts at variance with the contemporary *hebraica veritas* of the rabbis. Although he knew that

the Greek text could become corrupted, he believed that it had begun as a miraculously produced translation which agreed with that *hebraica veritas*. Origen saw his task to be the restoration of the text circulating in his day as "the Septuagint" to its original state as the uncorrupted translation of the Seventy Elders. This would then be identical with the Hebrew text which, he believed, had existed back at the time of the translation and continued unchanged unto his own day. Since he not only accepted the static quality of the Hebrew text uncritically, but also assumed that the Greek was corrupt when it diverged from the Semitic "original," he included insertions from θ^f and α^f in order to make the Greek conform to the rabbinic text current in his day, thereby compounding errors in the OG.

One final but important point needs to be stated about the stratigraphy of the text of Daniel: the θ^f text sometimes contains the authentic OG where the σ^f text does not. That is, the θ^f text, based on the OG but revising it, preserves the OG intact, wherever through conscious choice, inadvertence, or inconsistency, the basic text was allowed to stand unrevised. Not cognizant of this textual history, Origen sometimes changed the authentic original text (preserved in θ^f) in light of the MT; and thus the OG will be found in the θ^f text, not in the σ^f text.

Implications for the Investigation of Theological *Tendenz*

The history and stratigraphy of the text help us understand how variants in the σ^f text which at first glance may appear to present a tendentious translation on the part of the OG translator may in fact not do so. The "variant" reading may, of course, be exactly that. But it may also be simply a faithful translation of a variant *Vorlage*. Or again, the reading now attributed to σ^f may come from a secondary stage in the history of the Greek text, being a corruption of an originally accurate translation. It is this third possibility which will now be investigated in the following analysis.

One of the most important verses cited as evidence for theological *Tendenz* on the part of the OG translator is 7:13. F. F. Bruce claims

to have uncovered interpretative material here which reveals "an astonishing statement about the 'one like a son of man'—that he appeared 'as (the) Ancient of Days.'" ³⁰

7:13

III כְּבַר אֲנִי אֶשְׁמַע הַיְיָ וְעַד הַיּוֹמִי אֵינִי
מִשְׁמַע הַיְיָ וְעַד הַיּוֹמִי אֵינִי

σ^f ὡς υἱὸς ἀνθρώπου ἤρχετο καὶ εὖς παλαιοῦ ἡμερῶν
παρῆν καὶ οἱ παρεστηκοτεὶ προσῆγαγον αὐτὸν

88-Syh ὡς υἱὸς ἀνθρώπου ἤρχετο καὶ ὡς παλαιὸς ἡμερῶν
παρῆν καὶ οἱ παρεστηκοτεὶ παρῆσαν αὐτῷ

θ^f ὡς υἱὸς ἀνθ. ἐρχομενὸς καὶ εὖς τοῦ παλαιοῦ τῶν ἡμερῶν
ἐφθάσε καὶ προσῆχθη αὐτῷ

It is important to note that Bruce presents as "the Septuagint version" the reading of 88-Syh (cf. the Swete edition) and not that of the text established by Ziegler in the Göttingen edition. Bruce offers two explanations to account for the reading καὶ ὡς παλαιός. ³¹ (1) ὡς is possibly used as "an adverbial conjunction of time" with the following sense: "as (when) the Ancient of Days arrived, then (καὶ) the bystanders were present beside him," or "...then (καὶ) the bystanders presented him," depending on whether one accepts παρῆσαν αὐτῷ or the apparent reading of the margin in the Syro-Hexapla προσῆγαγον αὐτὸν.

(2) If, however, ὡς before παλαιός ἡμερῶν has the same force as the preceding ὡς before υἱὸς ἀνθρώπου, and the following καὶ is not apodotic but an ordinary conjunction, then we have an astonishing statement about the "one like a son of man"—that he appeared "as (the) Ancient of Days"—but a statement which is not unparalleled. ³²

Bruce finds other evidence which points to this interpretative activity in the Book of Revelation, in which the description of the one like a son of man is modeled on the Ancient of Days. Also, in Mark's gospel when Jesus speaks of the Son of Man coming on the clouds of heaven, he is convicted of blasphemy, perhaps, Bruce suggests, because the high priest understood that the son of man does come

ως παλαιος ημερων and thus he knew that Jesus was claiming to be the equal of God.

If Professor Bruce's reconstruction were accurate for the OG, he would indeed have appropriate data to argue this case. In fairness to him it should be said that he does consider Ziegler's text, that he does weigh whether "the Septuagint reading" might be a corruption, and that he does consider the possibility of Christian influence. But it is difficult to avoid the overwhelming impression that these factors are not of predominant importance and that "the oldest Greek version of Daniel" probably "intended" the readings and meanings which Bruce describes. This impression is given by the title, structure, wording, and balance of his article.

Ziegler, however, has reconstructed the OG as και εως παλαιου ημερων παρην, noting that Tertullian, Cyprian and Consultationes are early witnesses to that text (against ως παλαιος). Moreover, he suggests the probability that εως was corrupted to ως because of the preceding phrase ως υιος ανθρωπου. Furthermore, the immediately preceding και makes the loss of *epsilon* more understandable. After εως was corrupted to ως, the genitive παλαιου would have been hyper-corrected to the nominative παλαιος in order for the phrase to be grammatically "correct." On this last point Bruce agrees, but in general he seems persuaded by the single, late, 9th-11th century MS 88 and Syh. Montgomery agrees that the text of Origen (which he incorrectly identifies with the OG) preserves an aberration, calling ως παλαιος an "ancient error."³³ Therefore, instead of calling ως παλαιος an example of great interpretative weight on the part of the OG translator, it should rather be seen as a secondary scribal development in the transmission history of the Greek text, probably even happening in two stages: εως > ως (inadvertent loss), then παλαιου > παλαιος (deliberate "correction").

As illustrations of the first stage, there are several similar secondary corruptions which follow this pattern in the transmission history of the G text: after εισηλθον, εν is lost in 10:12, κατα is

lost in 10:15, ου in 11:15, and και in 11:21—all similar examples of losses in the transmission of the Greek.

Moreover, the reading παρησαν αυτω in 88-Syh is also a secondary corruption of the original προσηγαγον αυτον attested ("vid.") in the margin of Syh and in Justin, Tertullian, Cyprian, and Consultationes. The secondary substitution of παρειμι for προσαγω was prompted by the preceding use of παρειμι (παρην). Once προσηγαγον was altered to παρησαν, the corruption of αυτον to αυτω follows from sense. Note other examples of secondary corruptions in the OG tradition: in 7:28 ετηρησα (τηρω) is corrupted to εστηριξα (στηριζω), and in 8:26 ερρεθη (ρω) is corrupted to ηυρεθη (ευρισκω).

It should also be noted that the OG translation of 81מני קניה טו by εως παλαιου ημερων, which lacks the article to correspond with the emphatic state, can in no way be interpreted as saying that the OG was intentionally lessening the import of the Ancient of Days by referring to him without the definite article. There are two reasons supporting this. First, the OG does not consistently translate with the definite article the construct chain, e.g.:

7:2

ⲙ	Ⲛⲃⲗ Ⲛⲙⲓ
ο° 967	εις μεγαλην θαλασσαν
θ° 88-Syh	εις την θαλασσαν την μεγαλην

This example is especially interesting because we see how a later recension of the OG alters it to correspond more literally with the Aramaic; 88-Syh preserves not the OG but the later recensional text.

Secondly, the OG was also influenced by the previous reference to an Ancient of Days in the poetic section (7:9) where he is referred to without the article; it is simply 81מני קניה טו = παλαιος ημερων (ο° θ°). Both these examples show that the rendering εως παλαιου ημερων, without the article, is representative of typical OG translation practices.

Conclusion

This investigation of Dan 7:13 shows that to make a judgment about putative *Tendenz* in the OG based solely upon Origen's *o'* text without knowledge of the history of the text of Daniel constitutes a serious methodological error. It is essential first to establish critically the OG text and to inquire into the *Vorlage* of the OG. In this example, the OG translator accurately conveyed the text, but later on corruptions and changes infiltrated the text, accounting for the variations now found in the text of 88-Syh. A study of the layers of textual development opens the possibilities for more clearly focused judgment concerning textual variants and for a more accurate assessment of the OG translation.

NOTES

¹These studies include: August Bludau, *Die alexandrinische Übersetzung des Buches Daniel und ihr Verhältniss zum massorethischen Text* (BibS[F] 2/2-3; Freiburg i.B.: Herder'sche Verlags-handlung, 1897) esp. pp. 104-130; F. F. Bruce, "The Earliest Old Testament Interpretation," *OTS* 17 (1972) 37-52; "The Oldest Greek Version of Daniel," *OTS* 20 (1975) 22-40; "Prophetic Interpretation in the Septuagint," *BIOSCS* 12 (1979) 17-26; J. Lust, "Daniel 7,13 and the Septuagint," *ETL* 54 (1978) 62-69; A. McCrystall, "Studies in the Old Greek of Daniel," unpublished doctoral dissertation, University of Oxford, 1980.

²1QDan^{a,b} are found in D. Barthélemy and J. T. Milik, *Qumran Cave I* (DJD 1; Oxford: Clarendon, 1955) 150-52; cf. J. C. Trever, "Completion of the Publication of Some Fragments from Qumran Cave I," *RevQ* 5 (1964-66) 323-44. 6QDan is found in M. Baillet, J. T. Milik, and R. de Vaux, *Les 'Petites Grottes' de Qumran* (DJD 3; Oxford: Clarendon, 1962) 114-116. 1QDan^a contains 1:10-17; 2:2-6; 1QDan^b contains 3:22-30. Both 1Q MSS date from the Herodian period. 6QDan, dated ca. 50 C.E., contains 8:16-17?, 20-21?; 10:8-16; 11:33-36, 38. There are two further fragmentary MSS of Daniel: 4QDan^d with 13 small, nearly illegible frgs., and 4QDan^e with 5 tiny frgs. from Daniel 9.

³Cf. the statement of A. Di Lella that "instead of the MT gloss 'aramit', 'Aramaic,' 1QDan^a leaves a space between the Hebrew and Aramaic text" (L. Hartman and A. Di Lella, *The Book of Daniel* [AB

23; Garden City, NY: Doubleday, 1978] 73; cf. similarly, p. 138). The case should be stated more precisely. The right half of the column with the lines containing 2:2-6 is preserved, while the left half has been lost. 2:4b begins on a new line with indentation, thus with a space before the Aramaic section. But 2:4a is mostly off the leather; there is space for יתצטרף to have been included at the end of the line before the new line with 2:4b. Thus, though the gloss is not preserved in 1QDan^a, we cannot state or presume that it was omitted.

⁴I am grateful to Professors Cross and Ulrich for their permission to use the photographs and to consult the original fragments.

⁵See J. M. Allegro, *Qumran Cave 4: I (4Q158-4Q186)* (DJD 5; Oxford: Clarendon, 1968) 54, and Pl. XIX, frg.3. See in conjunction and correction, J. Strugnell, "Notes en marge du volume V des 'Discoveries in the Judaean Desert of Jordan,'" *RevQ* 7/2 (1970) 177, 220-37.

⁶A. Mertens explains that "Statt יצטרף hat MT יצרפר [but read יצטרף], doch findet sich in palästinensischen Handschriften auch die Form יתצטרפ [read 'רן], freilich ohne Metathesis und Umwandlung des ה" (*Das Buch Daniel im Lichte der Texte vom Toten Meer* [Stuttgarter, Biblische Monographien 12; Würzburg: Echter; Stuttgart: Katholisches Bibelwerk, 1971] 29).

⁷For a comprehensive listing, see J. Ziegler, ed., *Susanna, Daniel, Bel et Draco* (Septuaginta: Vetus Testamentum Graecum Auctoritate Academiae Scientiarum Gottingensis editum 16/2; Vandenhoeck und Ruprecht, 1954) 28-36. For additional information see James A. Montgomery, *A Critical and Exegetical Commentary on the Book of Daniel* (ICC; New York: C. Scribner's Sons, 1927) 11-57, and Hartman and Di Lella, *The Book of Daniel*, 72-84.

⁸Ziegler (*Susanna, Daniel*, 13) reports that of 48 asterisks found, 37 are identical in 88 and in Syh, and 11 belong to the Syh alone. Of 38 obeli, 34 are identical in the two manuscripts, and 4 are found in Syh alone.

⁹A. Geissen, *Der Septuaginta-Text des Buches Daniel* (Papyrologische Texte und Abhandlungen 5; Bonn: R. Habelt, 1968). W. Hamm, *Der Septuaginta-Text des Buches Daniel nach dem Kölner Teil des Papyrus 967: Kap. I-II* (PTA 10; Bonn: R. Habelt, 1969); and *Kap. III-IV* (PTA 21; Bonn: R. Habelt, 1977). R. Roca-Puig, "Daniel: Dos Semifolis del Codex 967," *Papir de Barcelona* (Barcelona: 1974) = *Aegyptus* 56 (1976) 3-18.

The papyrus leaves apparently were separated without any particular order. For a listing of the contents of the papyrus, see Geissen, *Der Septuaginta-Text*, 12-16; F. G. Kenyon, *The Chester Beatty Biblical Papyri* (London: Emery Walker, 1938), fascicles 1, 7Text, and 7Plates. It is important to note that the leaves of 967 in the Cologne collection were not yet available to Ziegler in 1954.

¹⁰For a complete listing see Ziegler, *Susanna, Daniel*, 28-31.

¹¹*Ibid.*, 32-35.

¹²Important studies include the following: D. Barthélemy, "L'Ancien Testament a mûri à Alexandrie," pp. 127-39, and "Notes critiques sur quelques points d'histoire du texte," pp. 289-301 in *Etudes d'histoire du texte de l'Ancien Testament* (OBO 21; Fribourg, Suisse: Editions Universitaires; Göttingen: Vandenhoeck und Ruprecht, 1978). F. M. Cross, "The History of the Biblical Text in the Light of Discoveries in the Judaean Desert," *HTR* 57 (1964) 281-99; "The Evolution of a Theory of Local Texts," pp. 306-20 in F. M. Cross and S. Talmon, eds., *Qumran and the History of the Biblical Text* (Cambridge, MA: Harvard, 1975). S. Talmon, "Aspects of the Textual Transmission of the Bible in the Light of Qumran Manuscripts," *Textus* 4 (1964) 95-132, and "The Textual Study of the Bible—A New Outlook," pp. 321-400, esp. pp. 321-7 in *Qumran and the History*.

¹³See Sharon Pace, "The Old Greek Translation of Daniel 7-12," (Ph.D. diss., University of Notre Dame [University Microfilms], 1984), and Emanuel Tov, *The Text-Critical Use of the Septuagint in Biblical Research* (Jerusalem Biblical Studies 3; Jerusalem: Simor, 1981) 272-75.

¹⁴Aware of these cautions and uncertainties we are able to proceed to examine the relationships between these texts and judge individual readings.

¹⁵See references to Daniel and Dan'el in 1 Chr 3:1, Ezra 8:2, and Neh 10:7.

¹⁶Cf. 178 in 4QSam^C: Eugene Ulrich, "4QSam^C: A Fragmentary Manuscript of 2 Samuel 14-15 from the Scribe of the *Serek Hay-yahad* (1QS)," *BASOR* 235 (1979) 1-25, esp. pp. 3, 5, 7.

¹⁷A. Bludau, *Die alexandrinische Übersetzung*, 8; Hartman and Di Lella, *The Book of Daniel*, 78.

¹⁸*Ibid.*

¹⁹For the first set of passages above, note the following similar references in earlier biblical books: ἐπλησθη ἡ γῆ ἀδικίας in Gen 6:11,13, and ἡ γῆ αὐτῶν ἐπλησθη ἀδικίας in Jer 28(51):5. For the second set note the phrases ἐπεσον τραυματιαὶ πολλοὶ in Judg 9:40, ἤρξατο παρασσεῖν τραυματίας in Judg 9:39, and τραυματιαὶ πολλοὶ ἐπεσον in 1 Chr 5:22.

²⁰Elias Bickermann, "Zur Datierung des Pseudo-Aristeas," *ZNW* 29 (1930) 280-96.

²¹V. Tcherikover, "The Ideology of the Letter of Aristeas," *Studies in the Septuagint: Origins, Recensions, and Interpretations*, (ed. Sidney Jellicoe; New York: Ktav, 1974) 182.

²²Ralph W. Klein, *Textual Criticism of the Old Testament* (Guides to Biblical Scholarship; Philadelphia: Fortress, 1974) 2-3.

²³Though Barthélemy ("Redécouverte d'un chañon manquant de l'histoire de la Septante," *RB* 60 [1953] 18-29, esp. p. 19) had earlier assigned the scroll to the end of the first century C.E., most now date it roughly a century earlier; for a summary, cf. K. G. O'Connell, *The Theodotianic Revision of the Book of Exodus* (HSM 3; Cambridge, MA: Harvard, 1972) 3, n. 8.

²⁴O'Connell, *Theodotianic Revision*.

²⁵A. Schmitt, *Stammt der sogenannte 'Θ'-Text bei Daniel wirklich von Theodotion?* (Mitteilungen des Septuaginta-Unternehmens 9; Göttingen: Vandenhoeck und Ruprecht, 1966).

²⁶Di Lella maintains that because of Schmitt's study, the identification of Theodotion-Daniel with Proto-Theodotion that has been made by Barthélemy, Grelot, Delcor, and others should no longer be considered persuasive (*The Book of Daniel*, 81).

²⁷Walter R. Bodine, "Kaige and Other Recensional Developments in the Greek Text of Judges," *BIOSCS* 13 (1980) 45-57, esp. pp. 54-5 n. 29.

²⁸See Pace, "Old Greek"; Di Lella moves in the wrong direction when he asserts that it is "best to consider Theodotion-Daniel a fresh translation of the Hebrew and Aramaic...with an eye on LXX-Daniel rather than a recension in the usual sense of that word" (*The Book of Daniel*, 82).

²⁹Klein, *Textual Criticism*, 5-6.

³⁰F. F. Bruce, "The Oldest Greek," 25.

³¹*Ibid.*, 25-26.

³²*Ibid.*, 25.

³³Montgomery, *A Critical*, 34.

THE USE OF A COMPUTERIZED DATA BASE FOR
SEPTUAGINT RESEARCH: THE GREEK-HEBREW
PARALLEL ALIGNMENT

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I. Nature of the Data Base

The computerized data base of Septuagint studies which is being prepared at the University of Pennsylvania and the Hebrew University has been described in several earlier publications:

- R. A. Kraft and E. Tov, "Computer Assisted Tools for Septuagint Studies," *BIOSCS* 14 (1981) 22-40.
- W. Adler, "Computer Assisted Morphological Analysis of the Septuagint," *Textus* 11 (1984) 1-16.
- J. R. Abercrombie, "Computer Assisted Alignment of the Greek and Hebrew Biblical Texts - Programming Background," *Textus* 11 (1984) 125-139.
- E. Tov, "Computer Assisted Alignment of the Greek-Hebrew Equivalents of the Masoretic Text and the Septuagint," in press.
- E. Tov and B. G. Wright, "Computer Assisted Study of the Criteria for Assessing the Literalness of Translation Units in the LXX," in press.
- B. G. Wright, "A Note on the Statistical Analysis of Septuagintal Syntax," *JBL*, in press.
- J. R. Abercrombie, W. Adler, R. A. Kraft and E. Tov, *Ruth*, Computer Assisted Tools for Septuagint Studies, vol. 1, forthcoming.
- E. Tov, *A Computerized Data Base for Septuagint Studies - The Parallel Aligned Text of the Greek and Hebrew Bible*, CATSS, vol. 2, forthcoming.

The present article intends to indicate some of the uses and advantages of that data base. The more one is acquainted with the details of the data base, the better use can be made of its features and notations. In the present context, however, this will be done only in brief. For a fuller description of the nature of the data

base, one is referred to Computer Assisted Tools for Septuagint Studies (CATSS), volume 2.

The main purpose of the CATSS project is to create a flexible multi-purpose data base which contains the main types of data needed for the study of the LXX and its relation to the MT and other sources and literatures. In the perusal of the data base, types of information can be disregarded when necessary, and other information can be added according to specific needs.

The main section of the data base is composed of the following elements:

- A. A parallel alignment of all elements of the MT and LXX. The text of the MT follows the *Biblia Hebraica Stuttgartensia*, encoded under the direction of Professors R. Whitaker and H. Van Dyke Parunak with a grant from the Packard Foundation and now verified by the Jerusalem team. The text of the LXX (the edition of Rahlfs) was obtained from the *Thesaurus Linguae Graecae* in Irvine, CA. The initial alignment of the LXX and MT was created in 1982-83 by an automatic program written by Dr. J. Abercrombie of the University of Pennsylvania, and the results are corrected in accord with the project's conception of the equivalence of the MT and the LXX by E. Tov and his team in Jerusalem. The work is performed on the basis of a set of detailed instructions specifying the types of equivalence and the problems arising in the course of the work (CATSS, vol. 2). The alignment of the MT and the LXX creates exact equivalences of all elements in both texts in two parallel columns:

1. Column a of the Hebrew records the full set of formal equivalents of all elements of the two texts, as if the LXX were a mechanical translation from the MT. In this formal recording, several types of symbols are used indicating special phenomena and features which can be listed and analyzed separately after the completion of the recording.

2. Column b of the Hebrew records a selection of presumed equivalents of the LXX retroverted from the Greek, where the Greek seems to reflect a reading different from the MT. It also records select differences between the LXX and MT in the area of translational technique. The main purpose of this column is to provide data which are not available through the use of col. a.

Progress. A draft of the alignment of the MT and LXX has been created for all books with the aid of computer programs. The manual correction of the LXX and col. a of the Hebrew (formal equivalences) has been finished for all books of the LXX. In addition, the following apocryphal books have been included in the data base: Sirach (together with all extant Hebrew texts) and 1 Esdras (together with parallels from the canonical books). Work on col. b is progressing, and several books have already been finished. A sample of the alignment is appended to this article.

B. The variant readings to the Greek text. The main Greek text incorporated in the data base follows the text of Rahlfs (to be changed later to the text of the Göttingen editions when available), and to this text the full evidence of the variants is added, either from the Göttingen editions or those of the Cambridge series. For this purpose the contents of the apparatuses of these editions are reformatted to the structure of the data base, that is, one Greek word per line. The variants are encoded by the Philadelphia team under the direction of R. A. Kraft, and the system of recording the variants is described by Kraft in CATSS, vol. 1.

Progress. The apparatus of two books has been entered manually: Ruth and 2 Kings. The apparatus of other books is being entered automatically with the KDEM Optical Character Reader in Oxford and Philadelphia, and, after the proofreading of the work produced by KDEM, the data are reformatted into the desired form. Work is in progress on the following books: Deuteronomy, the Minor Prophets, Ezra, Nehemiah, and 1 Esdras.

C. A full morphological analysis of all words in the LXX, that is, all grammatical information relevant to the identification of the words, including their dictionary forms (e.g., E)/RXOMAI [ἔρχομαι] for H)=LQEN [ἦλθεν]). This includes such information as the person, number, tense, mode and type for verbs, and the case, number, gender and declension for nouns. The initial morphological analysis of the Greek words is produced with the aid of an automatic program for morphological analysis of Greek, written by David Packard and adapted for the LXX. The results of the automatic analysis are verified and analyzed by the team in Philadelphia. (See the detailed description by W. A. Adler in CATSS, vol. 1 and *Textus* 11.)

Progress. The initial automatic analysis of all books of the LXX has been completed, and the manual corrections have been incorporated.

D. Morphological analysis of all words in the MT, that is, grammatical information relating to all words in the Hebrew text.

Progress. The morphological analysis of the Hebrew lies outside the immediate aims of the CATSS project, and the necessary data will be obtained from sister projects. So far, the morphological analysis of three books has been obtained.

II. Limitations of the Data Base

It should be stressed from the outset that the data base does not provide answers to all questions in the study of the LXX or of its relation to the underlying Hebrew text. The data base contains many data scholars would like to be available when analyzing such issues, and many problems can be investigated only with the aid of a computerized data base. At the same time, there are many sets of data which are not included in the data base, especially those which involve complex judgments, but the

flexibility of the data base implies that they can be added at a later stage.

While most of the information in col. a is as objective as possible, it cannot be stressed sufficiently that the recording in that column also entails subjective aspects. In an undertaking of this kind absolute objectivity is impossible. At the same time, col. b contains many more subjective elements. Yet, these data are so important that scholars will likely want access to this type of material in spite of its subjective nature. Thus, while col. a records mainly objective information, col. b is primarily subjective.

III. Nature and Purpose of the Greek-Hebrew Alignment

The philosophy of the alignment is to record as precisely as possible the Greek-Hebrew equivalents of the LXX and MT. These equivalents are clear to the reader of the running parallel text. The relevant information is, as much as possible, contained in a single line of the alignment with a minimum of cross-references to other lines, so that it can be easily accessed with an indexing program. It should be remembered that this type of recording cannot produce detailed information regarding the context of individual words. A full analysis of the context has guided our decisions in the course of determining the equivalents, but these decisions have not been recorded in the data base itself.

The basic principle followed in recording the equivalents is that of formal representation. It is not easy to define this formalism, and it is equally difficult to translate this approach into practical guidelines, since it can be applied in different ways. The discussions with the members of the team have helped much in the clarification of the issues, but even after those discussions many problems remain.

The formalistic approach underlying the recording of the

equivalents of the LXX and col. a of the Hebrew implies that for the sake of argument the LXX is regarded as a translation of the MT. This is a mere convention adhered to by all biblical scholars, and it certainly represents the most useful approach to the study of the LXX, promising the most objective results. Yet, the procedure itself is problematic. First, the LXX simply was not translated from the MT. In a book like Jeremiah it is difficult to record the details of the LXX as having been derived from the MT, since the LXX probably reflects an earlier stage in the development of the book than the MT. Second, we do not know to what extent the present eclectic text of the LXX represents the original translation. After all, Rahlfs' text is a mere reconstruction. In spite of these difficulties the margin of error for Rahlfs' reconstruction (or that of the Goettingen editions) is small. Furthermore, the comparison of the LXX with the MT yields the most objective results for further research in the absence of any sound knowledge about the parent text of the LXX.

The main purpose of the alignment is thus to identify the Hebrew elements which are equivalent with elements in the LXX, or, put differently, which stand in the place of their counterparts in the LXX. In other words, the alignment records the Greek equivalents which the translators had in mind in the course of their transferring the message of the Hebrew into Greek. Necessarily, one often records the Greek equivalents of Hebrew words which differ from the words the translators had in mind or had in front of them because of textual differences between the parent texts of the LXX and the MT. In the course of recording the equivalents, these textual differences are temporarily disregarded. These differences are not disregarded in the data base, but they are excluded from col. a which presents, as much as possible, objective data. Information of this kind is transferred to col. b.

Likewise, in the course of recording the equivalents, exegesis is disregarded in the notation. Very free, paraphrastic, strange

and unusual renderings are recorded as regular equivalents in col. a, since they reflect in some way their counterpart in the MT. For a detailed discussion of the problems connected with recording the equivalents, see CATSS, vols. 1 and 2.

IV. Use of the Data Base

The data base can be used in various ways. In order to obtain the maximum amount of information from the data base, the various components described above must first be merged, especially for indexing and concordancing. For these purposes the computer must combine words which are found in completely different places in the alphabet, such as HLK [חלק] and W/YLK [וילך]. This information is found in the aforementioned morphological analyses of the Hebrew and Greek words.

One of the major reasons for creating a data base is to enable easy access to the data. These data can be stored in one form, and reformatted in various ways, not only as running (consecutive) texts, but also in other configurations. The data can be accessed in the following ways:

A. Searches for individual words, combinations of words, or letter patterns. Any computer system is capable of making such searches at some level, but for purposes of the larger data base, various relatively sophisticated search programs are needed. However, for the limited data base described here, these programs are not needed.

B. Indexing ("sorting") words in a particular part of the data base or in the data base as a whole. Such an index can create a simple list of all words in the exact form in which they occur in the text together with all other information present in the same computer record (line). The words can be sorted according to the desired alphabetical order (e.g., English, Hebrew, Greek). A similar index

can be made on the basis of the "dictionary form" (e.g., HLK [חלק]) in addition to the text form (e.g., W/YLK [וילך]).

C. Concordances. A concordance is based on the same principles as an index, but it also supplies the context of the indexed word.

D. Special programs. Other information that is not easily available through any of the three aforementioned formats can be obtained by means of various "tailor-made" programs created for specific purposes. The only limits to what is possible through this approach are the contents of the data base and the imagination and programming talents of the person using it.

The special attraction of the computer assisted research is that all of the individual segments of the data base as well as the entire bank itself can be accessed in all these different ways. Although we have not yet been able to take full advantage of all the possibilities created by the newly available data base, it is clear that new avenues are opened for all aspects of the study of textual criticism of the Hebrew and Greek Bible, linguistic analysis of the Hebrew and Greek, and the study of all the corpora which depend on the LXX.

In this article attention is paid to the use of the computerized data base, especially of the Greek-Hebrew alignment. We want to show in particular what kind of information can be obtained from the computerized data base. The greater part of this information relates to the study of the translational technique of the LXX, and, in fact, most of it is already available. The type of information listed below can be obtained at any computing center by anyone, including those who have no prior education in computers. Most of the information is provided by a so-called editor, extant in all computers.

The following data can be extracted easily from the data base:

1. Any word, word pattern, combination of words in the MT

and/or the LXX. OCP also provides statistics on these searches. These searches do not include variants, but programs have been written to include them.

2. All types of indices and concordances on the basis of the MT, the LXX, or both, of individual books or the data base as a whole. In addition, lists and analyses can be made of all individual features and symbols used in the data base, both for the MT and the LXX.

3. Lists and analyses of all the features of the morphological analysis of the Hebrew and Greek. For example, separate studies can be performed on the tenses of the Hebrew verb (with or without their Greek equivalents) or of the Hebrew equivalents of certain Greek tenses, or word groups such as prepositions.

4. Any aspect of the translational technique on which information is included in the data base (including morphological analysis of the Hebrew and Greek). Cf. the article by Tov and Wright relating to the criteria for assessing the literalness of translation units.

We now turn to certain details in the notation which can be singled out for separate analysis. The number in parentheses refers to the relevant paragraph in CATSS, vol. 2.

5. List of verses added in the LXX (on the basis of Rahlfs) (4.2.1).

6. List of asterisked words in the LXX of Job (on the basis of Rahlfs) (4.2.1).

7. Lists of all *Kefib-Qere* variations in the MT, including information on the relation of the LXX to them (4.3.4, 60).

8. Research on individual prefixed and attached elements of the Hebrew words, with or without their Greek equivalents, especially the prefixed W/ [-ו], and the various prepositions (B/, K/, L/, M/ [-ב, -ל, -כ, -ב]) and the pronominal suffixes (/Y, /W [,י-ו-], etc.) (4.4.6).

9. Differences in the numbering of verses between the MT and the LXX, often involving different text arrangements (4.5.5).

10. Representation of one Hebrew word by more than one Greek "main" word (5.3.2.1). For this purpose a special program must be written.

11. The different types and frequency of differences in sequence can be investigated for the various books. The frequency of stylistic and grammatical transpositions forms an indication of the literalness of the translation (7.7).

12. The nature, frequency and distribution of minuses and pluses of the LXX can be examined for the various books of the LXX. It should, however, be added that the notation does not distinguish between different types of minuses. Different categories of pluses are distinguished (8.4.4).

13. The types and frequency of doublets can be searched in the various books. Proverbs, for example, contains a large number of long doublets (10.1).

14. Types and frequency of "distributive" renderings, indicated as "{. . d", that is, elements referring to more than one word in the translation, such as pronouns, conjunctions and prepositions (10.6).

15. Types and frequency of "repetitive" renderings, indicated as "{. . r", that is, words occurring once in Hebrew, and represented more than once in Greek (11.4).

16. Renderings of Hebrew prepositions by Greek compound verbs (16.3.2).

17. Frequency and nature of prepositions added in the LXX in accordance with the translational habits of the various books (16.5.3).

18. Renderings of the construction Q+LTY Q+L [קטל קטל] (17.5.1).

19. Frequency and nature of transliterated Hebrew words (21.6).

20. Differences in verbs: active/passive (54.2.1.1).
21. Differences in prepositions (54.2.2.1).
22. Differences in vocalization (59.5).
23. The various types of interchanges of consonants between the MT and the presumed parent text of the LXX, as well as meta-thesis and differences in word-division (61.3).
24. All features of the data base which are denoted for individual mss can be searched, as well as the Hebrew equivalents of these mss. By the same token, a running text of the individual mss can be reconstructed, with or without the Hebrew equivalents (69).

APPENDIX

Sample of the Greek-Hebrew Alignment
(Ps 63:1-5 [62:1-5 LXX])

p	63	1	MZMWR	YALMO\S [62. 1]
p	63	1	L/DWD	TW=I DAVID [62. 1]
p	63	1	B/HYWT/W	E)N TW=I EI)=NAI AU)TO\N [62. 1]
p	63	1	B/MDBR	E)N TH=I E)RH/MW! [62. 1]
p	63	1	YHWDH	TH=S IOUDAI/AS [62. 1]
p	63	2	)LHYM	O(QEO\S [62. 2]
p	63	2	)L/Y	O(QEO/S MOU [62. 2]
p	63	2	)TH	--- [62. 2]
p	63	2	)\$XR/K	PRO\S SE\ ~ O)RQRI/ZW [62. 2]
p	63	2	CM)H	E)DI/YHSE/N [62. 2]
p	63	2	L/K	SOI [62. 2]
p	63	2	NP\$/Y	H(YUXH/ MOU [62. 2]
p	63	2	KMH = K/MH	POSAPLW=S [62. 2]
p	63	2	L/K	SOI [62. 2]
p	63	2	B&R/Y	H(SA/RC MOU [62. 2]
p	63	2	B/)RC	E)N GH=I [62. 2]
p	63	2	CYH	E)RH/MW! [62. 2]
p	63	2	W/(YP	KAI\ A)BA/TW! [62. 2]
p	63	2	BLY MYM	KAI\ A)NU/DRW! [62. 2]
p	63	3	KN	OU</TWS [62. 3]
p	63	3	B/QD\$	E)N TW=I A(GI/W! [62. 3]
p	63	3	XZTY/Y	W)/FGHN SOI [62. 3]
p	63	3	L/R)WT	TOU= I)DEI=N [62. 3]
p	63	3	(Z/K	TH\N DU/NAMI/N SOU [62. 3]
p	63	3	W/KBWD/K	KAI\ TH\N DO/CAN SOU [62. 3]
p	63	4	KY	O(/TI [62. 4]
p	63	4	+WB {...M/}	KREI=SSON [62. 4]
p	63	4	XSD/K	TO\ E)/LEO/S SOU [62. 4]
p	63	4	M/XYM	U(PE\R ZWA/S [62. 4]
p	63	4	&PT/Y	TA\ XEI/LH MOU [62. 4]
p	63	4	Y#\$XWN/K	E)PAINE/SOUI/N SE [62. 4]
p	63	5	KN	OU</TWS [62. 5]
p	63	5	)BRK/K	EU)LOQH/SW SE [62. 5]
p	63	5	B/XY/Y	E)N TH=I ZWH=I MOU [62. 5]
p	63	5	B/)\$M/K	E)N TW=I O)NO/MATI/ SOU [62. 5]
p	63	5	)&	A)RW= [62. 5]
p	63	5	KP/Y	TA\S XEI=RA/S MOU [62. 5]

THE USE OF THE COMPUTERIZED DATA BASE FOR THE
STUDY OF SEPTUAGINT REVISIONS

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I. Introduction

The following article illustrates some uses of the CATSS data base not previously treated in the publications associated with this project,¹ in particular, the marking of the data base with tags for specific linguistic phenomena and their retrieval with standard computer programs. The aligned Hebrew-Greek text can be tagged for any number of morphological, grammatical, syntactical and textual phenomena of interest to the researcher. The occurrences of these phenomena, in combination with other data recorded in the project or by themselves, can then be accessed easily and listed in any desired format. In this way exact information for the study of particular translational characteristics can be computer-generated from the CATSS data base.

The examples given here are all taken from the writer's work on translational and revisional technique in the Lucianic text of 2 Kings. A few words of explanation concerning the format of the aligned Hebrew-Greek text, which includes the Lucianic MSS, are necessary before proceeding.

II. Format

The readings of the Lucianic group of MSS have been culled from the apparatus of Brooke-McLean's (B-M) edition of the Greek Book of Kings. Every reading of these MSS which differs from the

main text (Rahlfs) is given a separate line in the data base.² The siglum of the relevant MS or MSS and a colon (at character position 38 of the line) precede the variant reading. The corresponding Hebrew entry is repeated for each variant line. All remarks in column b relating to variants are preceded by a double equal sign (=). The sigla of the MSS recorded are as follows:

v	Codex Vaticanus (chosen to represent the <i>kaige</i> group)
b	b' in B-M
b\$	b in B-M
o	o in B-M
r	r in B-M
c	c ₂ in B-M
e	e ₂ in B-M
[..]	lacuna in the MS

All variants are treated either as qualitative (marked simply by the colon after the MS siglum) or as quantitative. Additions are indicated by the plus sign immediately preceding the colon. Differences in sequence are treated by a combination of pluses and minuses marked with the tilde (~) exactly as in the main text. Pluses of MSS differing from that of the first variant are noted with the plus sign after the colon (:+) instead of before it.

III. Description of Tags

In addition to the above sigla, an apparatus of tags has been provided, describing the relationship of the variant readings to the main Greek text and to the MT in regard to assorted linguistic and textual phenomena. Such a system of tags is limited only by the imagination of the user, conciseness being the principal consideration. However, by anticipating the combinations of tagged phenomena most likely to be called for, the user can eliminate some later file manipulation.

In the following system, all tags are preceded either by the

appropriate for Greek idiom are tagged >nu.

2 8)T H/MYM TO\ U(/DWR >nu
2 8)T H/MYM bb\$orce: TA UDATA <nu

This pattern occurs also in 2:14 and 3:20. The Hebrew noun for *water* is always in the plural, while Greek normally uses the singular number. The Lucianic text has the Greek noun for *water* in the plural, in imitation of the Hebrew. In this respect it is a rendition more closely literal than the main text, and is so tagged.

3 18 B/YD/KM E)N XEIRIV U(MW=N <nu
3 18 B/YD/KM bb\$orce: EIS XEIRAS UMW=N >nu

The same also occurs in 9:24, 11:12, and 13:5. In the Hebrew, Elisha prophesies before Jehoshaphat and Jehoram that the Lord will give Moab "into your hand." Because the pronoun suffix is plural, the Lucianic reading, more attentive to simple logic than to Hebrew idiom, makes *hand* plural as well. The main tradition reflects the singular of the Hebrew.

B. Word Formation of Nouns

Another aspect of the noun that may assist in distinguishing between two Greek traditions is the difference in the word formation of nouns built on the same stem. These have been marked <wf. The direction of the arrow has no significance in this instance.

3 27 (LH O(LOKAU/TWMA <wf
3 27 (LH bb\$orce: OLOKAUTWSIN <wf

5 17 W/ZBX KAI\ QUSI/ASMA <wf
5 17 W/ZBX bb\$orce: H QUSIAN <wf

7 9 B&RH EU)AGGELI/AS <wf
7 9 B&RH bb\$orce: EUAGGELISMOU <wf
7 9 B&RH o: EUAGGELIAS <wf

9 13 H/M(LWT TW=N A)NABAQMW=N <wf
9 13 H/M(LWT bb\$orce: TWN ANABAQMIDWN <wf
9 13 H/M(LWT o: TWN ANABAQMW=N <wf

C. Substitution of Pronouns for Nouns

Of possible interest for the technique of the translator or reviser is the frequency of pronoun-for-noun substitution. These are tagged >pn; other MSS not sharing this substitution are tagged <pn.

10 27)T BYT H/B(L TO\N OI)=KON TOU= BAAL <pn
10 27)T BYT H/B(L v: —
10 27)T BYT H/B(L ==)T BYT/W bb\$orce: TON OIKON AUTOU >pn
10 27)T BYT H/B(L r: — ''

12 12)T H/KSP TO\ A)RGU/RION <pn
12 12)T H/KSP bb\$r: AUTO >pn
12 12)T H/KSP oce: AUTW >pn

22 19 YHWH KURI/OU <pn
22 19 YHWH bb\$orce: MOU >pn
22 19 YHWH o: KURIOU <pn
22 19 YHWH r: [. .]

D. Substitution of Nouns for Pronouns

Much more prevalent in the Lucianic text is the replacement of the pronoun by a noun. These are tagged >np; any MS retaining the pronoun is tagged <np.

8 20 B/YM/YW E)N TAI=S H(ME/RAIS AU)TOU= <np
8 20 B/YM/YW ==B/YMY :YHRM bb\$orce: EN TAIS HMERAS TOU IWRAM >np
8 20 B/YM/YW r: [. .]

14 7 HW) AU)TO\S <np
14 7 HW) bb\$oc: AUTOS AMESSIAS >np
14 7 HW) r: OUTWS AMESSIAS >np
14 7 HW) e: AUTOS AMESSA >np

25 1 L/MLK/W TH=S BASILEI/AS AU)TOU= <np
25 1 L/MLK/W bb\$orce: THS BASILEIAS SEDEKIOU >np
25 1 L/MLK/W r: [. .]

E. Nominal Prefixes

A striking aspect of the noun, hitherto unobserved in the literature, is the translation by both variant groups with the same nominal stem but with different prefixes or preformatives. There is no clearer indication of revisional work than this phenomenon.

They are marked <sn. The direction of the arrow is not significant.

1 13 L/NGD KATE/NANTI <sn
 1 13 L/NGD bb\$orce: APENANTI <sn

4 7 B/NWTR E)N TW=; E)PILOI/PW; <sn
 4 7 B/NWTR bb\$orce: EN TW KATALOIPW <sn
 4 7 B/NWTR o: EN TW EPILOIPW <sn

7 14 RKB E)PIBA/TAS <sn
 7 14 RKB bb\$orce: ANABATAS <sn
 7 14 RKB o: EPIBATAS <sn

The pattern in 7:14 occurs again in 9:19.

25 2 B/MCWR E)N PERIOXH=; <sn
 25 2 B/MCWR bb\$: EIS PERIOXHN <sn
 25 2 B/MCWR o: EIS SUNOXHN <sn

25 19 PQYD E)PISTA/THS <sn
 25 19 PQYD bb\$orce: KAQUESTAMENON <sn

F. Nominal Stems

The opposite phenomenon also occurs; that is, the reviser retains the prefix or preformative but changes the nominal stem itself. These are tagged <fn. Here the direction of the arrow is not significant.

7 9 (WWN A)NOMI/AN <fn
 7 9 (WWN bb\$orce: ADIKIAN <fn
 7 9 (WWN o: ANOMIAN <fn

16 17)T H/MSGRWT TAV SUGKLEI/SMATA <fn
 16 17)T H/MSGRWT bb\$: TA SUSKEMMATA <fn
 16 17)T H/MSGRWT orce: TA SUGKLEISMATA <fn

18 31 BRKH EU)LOGI/AN <fn
 18 31 BRKH bb\$orce: EUDOKIAN <fn

V. Differences between Finite Verbs

Many of the types of revisional changes among nouns demonstrated above also take place among finite verbs. The tags for these are the same as for their counterparts listed above, except that the letter *n* is replaced by the letter *v*. By searching for the

part of the tag excluding the letter *n* or *v*, both nouns and verbs displaying the particular tagged phenomenon may be included in a single list.

A. Grammatical Number of Verbs

In parallel to the tag *nu* (see IV.A. above) are instances in which the number of the Greek verb is brought into conformity with that of the Hebrew verb. These are tagged <vu.

2 22 W/YRPW KAV I)A/QHSAN <vu
 2 22 W/YRPW bb\$orce: KAI IAQH >vu
 2 22 H/MYM TAV U(/DATA <aa

The subject of the verb is the water. Unlike the above-cited example, here the whole Greek tradition has the noun for water in the plural. But in Greek a neuter plural subject may take a singular verb. The main text retains the plural verb and so is tagged as being more hebraistic.

3 24 W/YNSW KAV E)/FUGON <vu
 3 24 W/YNSW bb\$orce: KAI EFUGE >vu
 3 24 W/YNSW o: KAI EFUGON <vu

3 26 YKLW H)DUNH/QHSAN <vu
 3 26 YKLW bb\$orce: HDUNHQH >vu

B. Verbal Prefixes

There are some seventy cases in 2 Kings where the prefix or preformative of the finite verb is changed, but the stem and inflection are left the same. This change should be compared to *sn* (see IV.E. above). They have been tagged <sv.

1 6 \$WBW E)PISTRA/FHTE <sv
 1 6 \$WBW bb\$orce: APOSTRAFHTE <sv
 1 6 \$WBW r: [..]

This recurs at 2:24, 7:15, 9:15, 13:25, 19:8, 20:2,10, 22:9, 23:20.

4 2 HGYDY A)NA/GGEILO/N <sv
 4 2 HGYDY v: ---
 4 2 HGYDY bb\$orce: APAGGEILON <sv
 4 2 HGYDY e: ANAGGEILON <sv

This also occurs at 5:4, 6:11,12,13, 7:12, 8:7, 9:12,20, 18:37.

4 31 W/Y\$B	KAI\ E)PE/STREYEN <sv
4 31 W/Y\$B	bb\$ce: KAI UPESTREYEN <sv
4 31 W/Y\$B	o: KAI EPESTREYEN <sv
4 31 W/Y\$B	r: [..]

This also occurs at 9:36, 13:25, 24:1.

C. Verbal Stems

The "opposite" phenomenon is also quite frequent; here the reviser retains the verbal prefix or preformative but changes the stem. These have been tagged <fv. To this change may be compared fn (see IV.F. above).

8 1 HXYH	E)ZWPURHSEN <fv
8 1 HXYH	bb\$oce: EZWOPOIHSE <fv

This interchange also occurs three times at 8:5.

10 27 W/YTCW	KAI\ KATE/SPASAN <fv <1x
10 27 W/YTCW	r: KAI KATEPATHSAN <fv >1x

11 16 W/YGMW	KAI\ E)PE/QHKAN <fv
11 16 W/YGMW	bb\$oce: KAI EPEBALON <fv
11 16 W/YGMW	r: [..]

The same also occurs in 18:14.

18 4 W/KRT	KAI\ E)CWLE/QREUSEN <fv
18 4 W/KRT	bb\$oce: ECEKOYE <fv
18 4 W/KRT	r: [..]

The same also occurs in 23:14.

D. Compound for Simplex

Eighty-odd times the Lucianic revision displays a compound form of the verb where the main text is satisfied with the simplex. These are tagged >cs. The simplex form is tagged <cs.

11 13 H/RCYM	TW=N TREXO/NTWN <cs
11 13 H/RCYM	bb\$orce: TWN PARATREXONTWN >cs

19 25 HBY)TY/H	v: SUNH/GAGON AU)TH/N >cs
19 25 HBY)TY/H	bb\$: HGAGON AUTHN <cs
19 25 HBY)TY/H	oc: SUNHGAGON AUTHN >cs

19 25 HBY)TY/H	r: [..]
19 25 HBY)TY/H	e: HGAGA AUTHN <cs
25 1 W/YBNW	KAI\ W);KODO/MHSEN <cs
25 1 W/YBNW	b: ---
25 1 W/YBNW	bb\$oce: KAI PERIWKODOMHSEN >cs
25 1 W/YBNW	r: [..]

VI. Differences Involving Infinitives

Any instance in which translators or revisers allow themselves the liberty to alter the grammatical form of a word is a potential gauge of literalism. The writer has amassed several dozen categories, examples of which space will not allow. They deal with the use of the definite article and the relative pronoun both in Hebrew and in Greek, the representation of the Hebrew *status constructus*, the substitution of nouns for verbs and vice versa, the interchange between finite verbs and participles, and the use of the historical present, among others. However, in order to give a further idea of the type of interesting interchanges tagged, the infinitive will be displayed.

A. Finite Verb for Infinitive

First, we may consider the instances in which the Hebrew infinitive is rendered by a finite verb in Greek. These have been tagged >fi; if another MS translates the infinitive in question by the Greek infinitive it is tagged <fi.

6 25 HYWT	E)GENH/QH >fi
6 25 HYWT	bb\$oce: TOU GENESQAI <fi
6 25 HYWT	r: [..]

7 12 L/HXBH	KAI\ E)KRU/BHSAN >fi
7 12 L/HXBH	bb\$ce: KRUBHNAI <fi
7 12 L/HXBH	o: KAI EKRU/BHSAN >fi
7 12 L/HXBH	r: [..]

B. Infinitive for Finite Verb

The reverse also obtains, with the Greek using an infinitive to render a finite verb in Hebrew. This is marked >if; the MSS

not taking this step are marked <if.

```

1 13 W/Y$LX          A)POSTEI=LAI >if
1 13 W/Y$LX          b: --- ''
1 13 W/Y$LX          bb$orce: APOSTEILE <if
1 13 W/Y$LX          r: [...]

9 23 W/YNS           TOU= FUGEI=N >if
9 23 W/YNS           v: KAI\ E)/FUGEN <if
9 23 W/YNS           r: [...]

19 11 L/HXRYM/M      TOU= A)NAQEMATI/SAI AU)TA/S >if
19 11 L/HXRYM/M      bb$: WS ECWLEQREUSEN AUTHN <if
19 11 L/HXRYM/M      orce: WS ECWLEQREUSAN AUTHN <if

```

C. Subjunctive for Infinitive

A special instance of the above is the rendition of the Hebrew infinitive of purpose by the Greek subjunctive. This is tagged >si; the MSS which do not use the subjunctive are tagged <si.

```

4 13 L/(&WT          DEI= POIH=SAI/ <si
4 13 L/(&WT          bb$orce: POIHSWMEN >si
4 13 L/(&WT          o: DH POIHSAI <si

18 27 L/)&KL         TOU= FAGEI=N <si
18 27 L/)&KL         bb$orce: INA FAGWSI >si

18 27 W/L/$TWT      KAI\ PIEI=N <si
18 27 W/L/$TWT      bb$orce: KAI PIWSIN >si

```

D. Aorist for Present Infinitive

On the purely intra-Greek level, the Lucianic text sometimes prefers an aorist infinitive for a present infinitive in the main text. These are marked <ai and <pi respectively.

```

3 21 L/HLXM          POLEMEI=N <pi
3 21 L/HLXM          bb$orce: POLEMHSAI <ai
3 21 L/HLXM          o: POLEMEIN <pi

```

This example recurs in 19:9.

```

10 11 H$)YR         KATALIPEI=N <pi
10 11 H$)YR         bb$orce: KATALEIFQHNAI <ai

12 13 L/XZQ         TOU= KATASXEI=N <pi
12 13 L/XZQ         bb$orce: TOU KRATAIWSAI <ai

```

```

21 6 L/(&WT          TOU= POIEI=N <pi
21 6 L/(&WT          bb$ce: TOU POIHSAI <ai
21 6 L/(&WT          o: {..~KAI EPOIHSE} <si
21 6 L/(&WT          r: [...]

23 19 L/HK(YS       PARORGI/ZEIN <pi
23 19 L/HK(YS       bb$orce: TOU PARORGISAI <ai
23 19 L/HK(YS       r: [...]

```

Thus far, only examples of phenomena especially tagged for the purpose have been shown. However, as noted above, tags can be searched in combination with other symbols or components of the data base recorded in CATSS, thereby generating highly specific lists relating to translational technique. When all the components of the data base, including morphological analyses, are merged, many other possibilities will be open for linguistic analysis. In the meantime, certain phenomena have been tagged which the morphological analysis will render superfluous.

E. Greek Article with Infinitive

Regarding the use of the Greek article with the infinitive, the literal translator is faced with a dilemma. Either the prefixed *lamed* must be rendered with TOU= [τ ο ū] and a word "added" to the length of the sentence, or the *lamed* must be ignored. In other words, the literal translator's goal of representing each word in the source language with exactly one word in the target language (quantitative representation)³ conflicts with the desire to represent every grammatical feature of the source text, since the article is a prefix in Hebrew but is a separate word in Greek.

All instances in which the Greek "adds" the definite article have been tagged >ag, whereas MSS in which the *lamed* is ignored have been tagged <ag. By searching for the Hebrew infinitive (in lieu of a complete morphological analysis of the Hebrew, searching for L/ [>] will discover the majority of occurrences) together with >ag, we see how the different revisions behave in the matter of "adding" the article before the Greek infinitive.

2 10 L/(\$)WL TOU= AI)TH/SASQAI >ag
 3 13 L/TT TOU= PARADOU=NAI >ag
 3 13 L/TT r: PARADOUNAI <ag
 5 7 L/HMYT TOU= QANATW=SAI >ag
 5 7 L/HMYT bb\$orce: QANATW=SAI <ag
 5 7 L/HMYT r: [..]
 6 9 M/(BR MH\ PARELQEI=N <sv <ag
 6 9 M/(BR bb\$orce: TOU MH DIELQEIN <sv >ag
 6 9 M/(BR o: MH PARELQEIN <ag
 6 9 M/(BR r: [..]
 6 23 L/BW TOU= E)LQEIN=N >ag
 6 23 L/BW bb\$orce: ELQEIN <ag
 6 23 L/BW r: [..]
 13 23 H\$XYT/M DIAFQEI=RAI AU)TOU\S <ag
 13 23 H\$XYT/M bb\$orce: TOU DIAFQEIRAI AUTOUS [7] >ag
 14 27 L/MXWT E)CALEI=YAI <lx <ag
 14 27 L/MXWT bb\$orce: TOU DIAFQEIRAI >lx >ag
 14 27 L/MXWT r: DIAFQEIRAI >lx <ag
 15 19 L/HYWT EI)=NAI <ag
 15 19 L/HYWT bb\$orce: TOU EINAI >ag
 15 19 L/HXZYQ ---
 15 19 L/HXZYQ bb\$: TOU KRATAIWSAI >ag
 15 19 L/HXZYQ orce: KRATAIWSAI <ag

VII. Differences between Transliterations and Translations

A second revisional phenomenon which can be isolated for study by searching for two separate symbols simultaneously is the contrast of transcriptions with translations. The use of transcriptions has been identified as a characteristic of the *kaige* revision.⁴

The project has marked all transcriptions with the symbol {t}.⁵ The writer in turn has tagged the instances in the variant file where another text offers a translation in place of a transliteration. These are tagged <tr. Calling the two up together, we receive the following data:

8 8 MNXH MANAA {t}
 8 8 MNXH v: MAANA/ {t}
 8 8 MNXH bb\$orce: DWRA <tr
 8 8 MNXH r: [..]

This occurs also at 17:3,4, 20:12.

8 15 H/MKBR v: TO\N XABBAI {t}
 8 15 H/MKBR bb\$orce: TO STRWMA <tr
 8 15 H/MKBR r: [..]

11 4 W/L/RCYM v: KAI\ TO\N R(ASEI/N {t}
 11 4 W/L/RCYM <tr bb\$orce: {..TWN PARATREXONTWN}{d}KAI TON RASEIM
 11 4 W/L/RCYM <tr c: {..TWN PARATREXONTWN}{d}KAI TON RASEIN

VIII. Differences in Word Order

A third example of the type of data which can be accessed by searching for two symbols together is reaccommodations in word sequence. The CATSS data base marks with the tilde all deviations in word order on the part of the Greek which may reflect a different *Vortage*.⁶ In certain instances, the different word order in the text at variance with the main Greek text represents a revision towards the MT. Such instances have been tagged <o. Searching for ~ along with <o produces:

6 19 H/DRK ~ =H/(YR H(PO/LIS
 6 19 H/DRK bb\$orce: H ODOS <o
 6 19 H/DRK ~ =H/(YR o: H POLIS
 6 19 H/DRK r: [..]
 6 19 W/L) KAI\ {..dOU)X}
 6 19 W/L) bb\$orce: KAI OUX
 6 19 W/L) r: [..]
 6 19 ZH AU(/TH
 6 19 ZH r: [..]
 6 19 ~ H/(YR =H/DRK H(O(DO/S
 6 19 H/(YR bb\$orce: H POLIS <o
 6 19 ~ H/(YR =H/DRK o: H ODOS
 6 19 H/(YR r: [..]

IX. Conclusion

By means of this brief sampling of possibilities for tagging the CATSS data base the writer hopes to induce others occupied with LXX translational technique into more comprehensive studies.

Already several lines of investigation have been opened which had received virtually no attention, e.g., the revision of Greek prefixes and preformatives without touching the stem and vice versa. This is not due to any past lack of diligence; rather, the size of the corpus made the consideration of such detailed information impractical. With the arrival of computer technology for textual studies, the situation is entirely different. The only real limitation to what can profitably be investigated is the scholar's own resources, familiarity with the field, and ability to define the problems.

NOTES

1. For details, see E. Tov above, p. 36. The present article serves as a sequel to Tov's article.
2. See also R. Kraft's description of the recording of variants in CATSS, vol. 1.
3. For an extended definition of quantitative representation, see E. Tov, *The Text-Critical Use of the Septuagint in Biblical Research* (Jerusalem Biblical Studies 3; Jerusalem: Simor, 1981) 58-59.
4. E. Tov, "Transliterations of Hebrew Words in the Greek Versions of the OT--A New Characteristic of the *kaige*-Th. Revision?" *Textus* 8 (1973) 78-92.
5. See E. Tov, *A Computerized Data Base for Septuagint Studies: The Parallel Aligned Text of the Greek and Hebrew Bible*, 21.1-5 (forthcoming).
6. *Ibid.*, 7.1-5.

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